news letter

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No. 4.

John T. Bowen, Senior Electrical Engineer, died October 17. Mr. Bowen was a graduate in electrical and mechanical engineering, from Clemson College, South Carolina. He also did a year's post graduate work in machine design, at the same institution, and a year of electrical engineering at Brooklyn Polytechnic Institute. He spent five years with William Cramp Sons and Company, shipbuilders, in steam and electrical work; seven years with the Navy Department as electrical expert; and fourteen years as Technologist for the Bureau of Dairy Industry.

In 1926 he was transferred to the Division of Agricultural Engineering, Bureau of Public Roads (later the Bureau of Agricultural Engineering, now the Bureau of Agricultural Chemistry and Engineering,) which position he held until his death.

Mr. Bowen was author of several publications of the Department of Agriculture and of a text book entitled "Dairy Engineering." He was a member of the American Society of Agricultural Engineers, and of the American Society of Refrigerating Engineers.

GENERAL ADMINISTRATION

On October 8, Dr. Henry G. Knight, Dr. W. W. Skinner, Mr. S. H. McCrory, Mr. H. T. Herrick and Mr. Henry A. Donovan appeared before officials of the Budget Bureau engaged in conducting hearings on the 1942 estimates submitted by the Department of Agriculture.



S. H. McCrory attended a Round Table discussion held by the National Safety Council at Chicago, Illinois, October 9 and 10.

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Dr. David J. Price left Washington on October 3 for a series of visits to the Northern, Western, and Southern Regional Research Laboratories. His object was to confer with Bureau officials and others interested regarding plans, specifications, equipment, and construction work at those laboratories. He returned to Washington October 14.

The report which Byron J. Culp, Assistant Safety Engineer, prepared upon his return from a safety and fire inspection of the Eastern Regional Laboratory, was sent to the Director of that laboratory. Copies also were sent to the Directors of the other three Regional Research Laboratories for their information. It is anticipated that Mr. Culp will visit all the laboratories, following occupancy, to make similar fire and safety surveys.

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F. L. Teuton, Chief of the Information Division, was at Dallas, Texas, October 2 to 8, setting up and managing the Bureau exhibit at the Texas State Fair. The exhibit requested by the State Fair officials, showed several phases of the industrial utilization of farm products. The exhibit contained the Regional Research Laboratory booth, which was displayed in the patio of the Department Administration building in Washington last fall; 4 new modernistic panels, one each on Naval Stores, Tanning Material, Sweetpotato Starch, and making paper from agricultural wastes; the cotton panels from the Southern Laboratory; and the panel from the Soybean Laboratory.

The Bureau's exhibit was given one of the best locations in the "Chemurgic Hall." More than 110,000 people visited the Fair on the opening day. This exhibit will also be shown at the Houston and Beaumont Fairs under the supervision of persons from the Southern Laboratory.

EASTERN REGIONAL RESEARCH LABORATORIES

A paper entitled "What Else Can we Do with Vegetables," by Dr. J. J. Willaman, Chief of the Biochemical Division of the Eastern Laboratory, appeared in the October, 1940, issue of the National Seedsman.

R. E. Lothrop gave an address entitled "Research on Industrial Utilization of Farm Products," before the members of the Men's Club of West Chester, Pa., the evening of September 19.

Installation of laboratory equipment in 10 laboratory rooms is rapidly being completed. Some of the rooms are already in use and research work is getting underway.

Considerable quantities of laboratory and shop equipment were recently moved from the Arlington Farm to the Eastern Laboratory. This equipment was taken from the laboratories of the former Industrial Farm Products Research Division.

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SOUTHERN REGIONAL RESEARCH LABORATORY

Dr. O. E. May, Director of the Northern Laboratory spent September 24 and 25 at the Southern Laboratory conferring with officials.

William B. Thomson was recently appointed Senior Clerk of Purchase and Property. Mr. Thomson was employed by a large industrial concern for the past 13 years, the last 9 of which were as assistant purchasing agent.

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WESTERN REGIONAL RESEARCH LABORATORY

It is expected that the staff will move into the new building at Albany, Calif. about November 1. The administration wing, laboratory wing, and service building are completed and now undergoing acceptance tests. Joseph A. Scott, Geo. T. Hemmeter, and K. V. Abakumoff from Washington, D. C., are assisting in conducting the tests.

Dr. Henry G. Knight conferred with members of the staff on September 27.

Frank M. Keller, Resident Engineer, who was in charge of Government supervision of the construction of the Laboratory has been granted a year's leave of absence for active duty with the Army as Captain in the Quartermaster Corps at Angel Island, in San Francisco Bay.

NORTHERN REGIONAL RESEARCH LABORATORY

Dr. E. C. Lathrop, J. H. Shollenberger accompanied by R.B. Gray, Chief, Farm Mechanical Equipment Research Division, visited the agricultural experiment stations of Iowa, Kansas, Minnesota, Nebraska, North Dakota, and South Dakota, in September, to obtain first-hand information concerning the present uses, methods of collection, and soil amendment value of agricultural residues. Strawboard mills were also visited at Hutchinson, Kans., and Fort Madison, Iowa.

George R. Boyd called at the Laboratory in September to discuss plans for testing the power plant equipment services.

Recent additions to the staff include Dr. Sulo A. Karjala, Associate Chemist, Starch and Dextrose Division; Alan Rhodes, Junior Chemical Engineer, Agricultural Residues Division; Messrs. John F. Shultz and Dwight L. Miller, Associate Chemists, Agricultural Motor Fuels Division; F. R. Earle, Assistant Chemist, Analytical and Physical Chemical Division; Elmer J. Wieland, Senior Engineering Draftsman, Engineering and Development Division.

Dr. Karjala was formerly research associate with Professor Karl Link of the University of Wisconsin; Mr. Rhodes was formerly in the employ of the Shell Oil Company at Martinez, Calif., and the Alcohol Tax Unit at San Francisco; Mr. Shultz was transferred from the Industrial Farm Products Research Division of the Bureau of Agricultural Chemistry and Engineering; Mr. Miller was employed by Hiram Walker and Sons, Inc., Peoria, Ill, and later by the Ethyl Gasoline Corporation, Baton Rouge, La., Mr. Earle was transferred from the Soybean Laboratory, Urbana, Ill. and Mr. Wieland was transferred from the Chemical Engineering Research Division of the Bureau.

PROCESSING OF FARM PRODUCTS RESEARCH

Fiber Flax Investigations:

Dr. Knight and Mr. McCrory inspected work in progress on fiber fiber flax machinery at Corvallis, Oreg., on September 20 and 21. Several pieces of new equipment were demonstrated in the shop and trips made to nearby farm cooperative flax plants to observe processing operations.

An experimental deseeder used at one of the flax plants has been brought to the shop for inspection and alteration. Several roller chain drives will be replaced by V-belts and anti-friction bearings installed throughout. The machine deseeded about 980 tons of flax straw during the 1940 season.

A flax straw breaker or crimper recently designed and constructed by Messrs. Widger and Taylor, performs in a satisfactory manner. The results so far obtained indicate that the machine will remove sufficient shives without the need of further processing operations. The action of the machine is also such that very little tow is produced.

In response to a request from an Oregon Weaving Guild some attention has been given to the design of hand looms suitable for weaving linens. A semi-automatic loom designed and constructed by Messrs. Klein, Carnes and Stafford has been placed in operation for test purposes.

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Cotton Ginning Investigations:

Heavy ginning was in full swing during this period, and the Bureau Staff at the U. S. Cotton Ginning Laboratory was consulted on a number of operating problems. Numerous plantation and commercial gins which were modernized during the idle season upon the engineering recommendations of the Bureau have reported gratifying results.

At Indianola, Miss., an all-steel nine-floor Government design vertical drier was placed directly over the distributor which carried seed cotton to the individual gin units. The new cone-type Rembert cotton handling fan developed by engineers of the Laboratory is in use at this cotton gin. The gin stands which were quite old but of sturdy construction, have been modernized upon the recommendations of the Bureau engineers to operate at a speed of 600 r.p.m. in comparison to a former speed of 450 r.p.m., and at the present time the gin is said to be producing some of the finest samples in the territory.

At Shell Mound, Miss., the plantation gin of Mr. Oscar Bledsoe, President of the Mississippi Staple Cotton Cooperative Association, has been modernized by the addition of a conditioning system employing a special oil burning furnace and other features recommended by Bureau engineers.

On U. S. Highway 49-W, north of Indianola, Miss., Messrs. Tanner and Garrard are erecting a plantation gin upon the recommendations provided by the Bureau engineers at Stoneville.

On September 25, C. A. Bennett made a trip to Arizona, New Mexico. and West Texas regions in company with F. L. Gerdes of the Agricuotural Marketing Service, and F. E. Lichte, Texas Extension Cotton Ginning Specialist, in order to make a preliminary inspection and survey of some new saw and roller gin establishments and to observe the operating elements which are of peculiar interest to the Laboratory. Roller ginning has been extensively revived in the El Paso and Arizona regions, and at El Paso a \$31,000 roller ginning plant has been erected by a group of planters upon general outlines suggested by the Bureau engineers at Stoneville. The gin stands are provided with rubber packing, spool-type winding, and forty-inch rollers, from which the ginned lint is effectively removed by revolving rubber flat doffers which were developed at the U. S. Cotton Ginning Laboratory by Roller Ginning Specialist, James S. Townsend, Bureau of Plant Industry, and Bureau engineers. The cotton authorities of the Agricultural Marketing Service, in their classing offices at El Paso, indicate that the sample being produced by this gin with its special features was equal to or better than, the highest grade in the Government standards.

Sea Island cotton is being grown at Texas points in the Houston area where roller gins were also inspected. Another roller ginning plant is located at San Benito, Texas.

Ginning activities in the saw gins of Arizona, New Mexico, and West Texas were also inspected and found to be in full swing. Many driers and other improvements advocated by the U.S. Ginning Laboratory have been installed since the last inspection trip, and a brief repeat survey will be undertaken in the near future to tabulate the changes which have been accomplished in the Texas region.

At the U. S. Cotton Ginning Laboratory at Stoneville, the annual research program is being conducted as rapidly as possible in order to accomplish many major objectives before the action of the draft tends to deplete the Staff.

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Cotton Packaging Investigations:

Tests at commercial gins are under way as a part of the cooperative work with the Agricultural Marketing Service, to observe the effects of varying speeds of condensers, trampers, and kickers upon the uniformity and quality of the ginned bale. Leonard Watson, of the Agricultural Marketing Service, and Jesse Harmond, of the Bureau of Agricultural Chemistry and Engineering, are jointly handling these tests which are being conducted within a radius of 27 miles of the Ginning Laboratory.

Included in the tests with the new standard density heavyduty press have been some interesting experiments with various forms of box dogs and bale ties. The ties have been of the conventional flat steel strap, as well as of high carbon steel wire which was used in 12, 13, and 14 gauge, the latter in both the adjustable and fixed length. After tying the cotton out with the different forms of ties, they were dropped from a height of 14 feet from the roller gin platform and tumbled end over end for about 50 feet. Each of the eight types was tested by suspending the bale of cotton from one tie and adding to the bale weight until the tie broke. The use of wire ties for cotton bales is of peculiar importance if any consideration of net weight arises, and over 20 patents have been obtained on forms of such ties by the Staff members of the cooperating Bureaus at the Laboratory. George E. Gaus of the Agricultural Marketing Service, has been particularly active in this phase of the packaging investigations.

A number of pilot bales of the Laboratory have, without expense to the Bureau, been displayed at very interesting FSA and Extension Service exhibits, at the Memphis and Jackson fairs. These bales have been loaned by our Bureau, and will be returned to the Laboratory by the exhibitors.

A number of pressing arrangements have been experimented with since the ginning season began and various forms of packing platens, box dogs, and other elements are being tried out. Automatic and mechanical cotton sampling, a project which has been initiated and fostered by the Agricultural Marketing Service, is being tested at the Packaging Laboratory where it can be done without interference with the regular runs. A special Agricultural Marketing Service crew under the direction of Dr. John W. Wright, is carrying on this work. An important 100 bale run is being ginned out in the Pressing Laboratory at the present time. Part of the bales will be handled in the new standard density press.

Bales were examined at the Houston and Littlefield compresses by Messrs. Bennett and Gerdes in connection with the packaging studies, during their recent trip into the western States. Where bales had been side-pressed by the doors during high density operations at the compresses, a distinct series of chevrons or ridges resulted in some bales, and this objectionable phenomenon may give rise to some important studies in the ensuing program of the Bankhead-Jones project.

The spiral-whirl cleaner loaned to the Bureau by the Whitin Machine Works of Whitinsville, Mass., has been received and is now being installed for important tests in an effort to establish possibilities of lint-flue cleaning before the cotton is packaged.

AGRICULTURAL BY PRODUCTS LABORATORY, AMES, IOWA

Dr. E. C. Lathrop and J. H. Shollenberger of the Northern Regional Research Laboratory and R. B. Gray of the Farm Mechanical Equipment Research Division, Washington, D. C. conferred with Dr. S. I. Argovsky at the Agricultural By-Products Laboratory on September 13 and 14.

Drs. G. E. Hilbert, Roy L. Whistler and Charles L. Mehltretter and C. E. Rist of the Northern Regional Research Laboratory visited the Agricultural By-Products Laboratory on September 18.

Y. D. Pan of Hongkong, China visited the laboratory on September 30, 1940.

RURAL ELECTRIFICATION RESEARCH

Richard L. Witz, a graduate of the University of Wisconsin, has been appointed to take the place of W. Berkeley Grizzard, who resigned as Agent. In addition to work done toward his Bachelor's degree at the University of Wisconsin, Mr. Witz has done a year of graduate work at Purdue University under the direction of Truman E. Hienton, who is in charge of Rural Electrification Investigations at that Institution.

Harry L. Garver drove to Lancaster, Pa., on September 20 to confer with officials of the Dellinger Manufacturing Company concerning a small corn sheller for the Southeastern United States. The problem of shelling corn in that part of the country is somewhat complicated by the fact that corn is snapped and not husked as it is in the Middle West.

The Division is attempting to improve the methods of fluecuring tobacco so as to obtain a more uniform product by the use of fans. In this connection Mr. Garver studied the air-curing methods employed near Lancaster, Pa., and the fire-curing methods at Lexington, Ky. At the latter place he consulted with Prof. J. B. Kelley and other members of the staff of the University of Mentucky regarding tobacco curing.

Mr. Garver also discussed with Prof. W. M. Insko, Jr., the use of infra-red lamps in the brooding of chicks.

NAVAL STORES RESEARCH DIVISION

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Dr. Martin Leatherman visited Edgewood Arsenal, Edgewood, Md., on September 27, where he conferred with officials of the Chemical Warfare Service regarding the use of naval stores products as fuel for flame throwers.

W. D. Pohle attended the meetings of the American Oil Chemists Society in Chicago, October 2-4. He presented a paper entitled: The Germicidal Activity of Rosin Soap and Fatty Acid-Rosin Soap as Indicated by Hand-Washing Experiments," by W. D. Pohle and L. S. Stuart.

C. F.Speh spent September 23 and 24 in New York, N.Y. discussing naval stores matters with dealers and users of naval stored products.

Prof. S. Heiberg, two assistant instructors, four graduate students and 34 undergraduates from New York State College of Forestry, Syracuse, N.Y., visited the Naval Stores Station, Olustee, Fla., Sept. 16, 1940, in connection with their tour of the South to study forestry activities, forestry lands, and timber, which trip is made every other year into the Southeast.

These trips are for forestry and forst product studies. The students were shown a complete naval stores operation from nursery practices through marketing, by the State and Federal agencies in Olustee. The visit to the Station was one of the most important studies in naval stores as it demonstrated the processes for turpentine gum from the time it leaves the forest until it is packaged as turpentine and rosin for the market.

The students were shown cups and accessories; the distillation of crude gum on the fire still, gum cleaning process, and steam distillation of refined gum. The work done in naval stores research by the laboratories in Washington was also explained. Publications for free distribution were given out explaining the work done for the small gum farmer as well as the large producer.

Unusual interest was shown in this work and it is planned to make the Station a part of the itinerary of this group in future trips South.

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. PROTEIN AND NUTRITION RESEARCH

Last year a crystalline organic compound containing selenium and sulfur was isolated by Dr. M. J. Horn of this Division from Astragulus, a plant growing on seleniferous soils. Its compósition and properties agreed with those of an isomorphous mixture of a selenium and sulfur amino acid, the sulfur compound having a thio-ether structure. While waiting for a fresh supply of Astragulus, it was suspected that under a certain treatment a sulfur-containing amino acid of the same type might be obtained from wool. Such an amino acid was actually isolated and its structure has been established by synthesis. It is the symmetrical thio-ether diamino acid, B-amino-B-carboxy-ethyl sulfide. (COOH - CH(NH2) - CH2 - S - CH2 - CH(NH2) - COOH). Two other crystalline compounds were also isolated that have properties corresponding to thio-ether amino acids. The isolation of these compounds from wool protein, and the similarity of their properties to the selenium compound isolated from the Astragulus constitutes strong confirmatory evidence that the organic selenium compound in Astragulus is a thio-ether (selenium) amino acid, and that this is also the form it is present in toxic wheat.

The new thio-ether from wool is of interest from a number of different angles. It is the first instance of the isolation of a thio-ether diamino acid obtained from the hydrolytic product of a protein. The question whether other proteins than wool, or the fibrous keratins, will yield thio-ethers under similar treatment remains an interesting possibility. The mechanism of the reaction between wool and dilute Na₂CO₃, whereby the disulfide bonds of cystine are split with the form-

ation of a grouping which on hydrolysis with acid yields thio-ether amino acids, opens up a field of investigation which may be of great value in elucidating problems relating to protein structure. The structural relationship of the thio-ether amino acid to cystine and methionine suggests interesting questions in connection with sulfur metabolism in animals. The fact that a toxic element such as selenium can become an integral part of an amino acid or protein opens up an entirely new conception as to the constitution and metabolism of plant and possibly animal proteins. This means that trace elements in the soil can and do take part in the metabolism of the plant. If selenium can do this, it is possible for other elements to become integral parts of the protein, depending on their presence in the soil. Several of these are toxic and their possible presence in foodstuffs will have to be taken into account. It may also be of particular interest to the organic ehemist as a basic compound for use in the synthesis of new organic compounds.

The following persons visited this Division to consult and discuss problems relating to proteins and amino acids: Prof. C.A. Brautlecht, University of Maine; Dr. F. E. Carruth, Director, Chemical Department, Maywood Chemical Works, Maywood, New Jersey; Dr. Barnard Lustig, The Pearson Research Foundation, West London Hospital, London, England. Dr. R. J. Block, Department of Chemistry, New York State Psychiatric Institute and Hospital, New York; Drs. W. J. Jackson, M. J. Blish, and A. K. Smith of the Eastern and Western Regional Laboratories, and the Soybean Laboratory, respectively.

FARM STRUCTURES RESEARCH

A. D. Edgar discussed potato storage and handling at a meeting of potato growers at Eaton, Colo. There is much interest in this area in improving potato storage and handling practices. Several potato growers are embodying his recommendations as to insulation, air circulation, and ventilation in new or remodeled storages. He has had a number of visitors from various points in Colorado who have come to Scottsbluff, Nebr. (his headquarters) to examine new types of buildings that are being developed through the storage research work.

M. G. Cropsey, Jr. Agricultural Engineer, is the author of a leaflet, "Management of Potato Storages," issued by the Extension Service of the North Dakota Agricultural College.

Joseph W. Simons of this Division and Frank B. Lanham of the Department of Agricultural Engineering, of the University of Georgia, have submitted a manuscript for a technical bulletin, "Georgia Farmhouse Investigations," covering the studies of comfort conditions and inexpensive structural improvements that can be made to increase comfort in summer and winter.

A. H. Senner and T.A.H. Miller have submitted a manuscript for a new bulletin "Fireplaces and Chimneys' to superside Farmers' Bulletin 1649 "Construction of Chimneys and Fireplaces." The new manuscript gives complete structural details for indoor and outdoor fireplaces based on an investigation of about 100 fireplaces by Mr. Senner and R. Tynes Smith. It also includes an interesting collection of photographs showing fireplaces for various uses and of different architectural styles.

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FARM MECHANICAL EQUIPMENT RESEARCH

After completing a trip with Messrs. Lathrop and Shollenberger in connection with conferences on the collection of crop residues, R. B. Gray called on the Allis-Chalmers Company of Milwaukee and made arrangement for the loan of a grass harvester for use in harvesting sweetpotato leaves for silage or hay, in connection with the sweetpotato project at Laurel. He then stopped at Madison, Wis. and discussed machinery investigations with Professor F. W. Duffee, Agricultural Engineer of that Station. On September 30 Mr. Gray attended a conference of the fertilizer committee in Chicago wherein the need of additional machinery work was emphasized, particularly in regions where we are not now working. The following three days were spent at the session of the Farm Equipment Institute at Chicago where a variety of interesting papers were given dealing with various phases of the farm machinery industry. Mr. Gray returned to Washington October 4.

On October 20 Mr. Gray left for a trip to the South to confer with the cotton machinery group at Auburn, Ala., and the sweetpotato machinery group at Laurel, Miss.

G. A. Cumings also attended the conference in Chicago on September 30 which pertained to current problems in the application of commercial fertilizers throughout the Midwestern States. State experiment stations, implement manufacturers, fertilizer manufacturers, sugar beet and canning crop associations, and the U. S. Department of Agriculture were represented at the conference. The lack of suitable equipment for proper placement of fertilizer for sugar beets and white beans, the need for deeper placement of fertilizer for corn, and the advisability of conducting coordinated fertilizer-placement research on soybeans, cannery peas, and other crops were among the principal points discussed.

On October 7 Mr. Cumings attended a conference to formulate a program for the annual meeting of the National Joint Committee on Fertilizer Application to be held in Chicago on December 2.

W. H. Redit was in Norfolk, Va., on September 25 and D. B. Eldredge was in North Carolina on October 11 to supervise the placement of fertilizer in cooperative experiments with the strawberry crop.

Several requests have been received recently by the Division to identify farm equipment published in Department and outside publications. In cases where Department policy is not involved, consideration should be given by the author as to the availability of the publicized device or machine to the public. Where the subject originates with the author, the possibility of a demand for working plans or other information should be anticipated.

R. M. Merrill spent several days in Mississippi and Arkansas observing the performance of several mechanical cotton pickers. A Rust Brothers picker was in the field near Clarksdale, Miss.; an International Harvester Company picker near Mariana, Ark., and a St. Louis Cotton Picker Company machine near Clarksdale, Ark. These machines all show considerable improvement over previous models. On this trip Mr. Merrill also visited the Mississippi Delta Experiment Station and the Ginning Laboratory at Stoneville, Miss., the Mississippi Experiment Station at State College, Miss., and farm machinery representatives at Memphis, Tenn., and Birmingham, Ala.

CHANGES IN PERSONNEL

Recent Appointments - Indefinite or Probationary

(Recent Appointments - Indefinite or Probationary)

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Thomas A. Bell
                     Agent (F.C.) (Raleigh, N.C.)
                                                          Agr. Chem. Res.Div
Martha E. Heffner
                     Jr. Clerk-Steno (Stoneville, Miss)
                                                          Cotton Ginning Inv.
Harold Lichtenstein
                     Asst. Messenger
                                                          Plans and Service
Charles O. Badgett
                                                          East . Reg . Res . Lab .
                    Asst. Scien. Aid (Wyndmoor, Pa.)
Glenn H. McConnaughey, Sr. Operating Eng. "
                                                          . 21
Mildred A. Novak
                      Jr. Clerk-Steno
                                                                11
Claude R. Smith
                      Chemist
Adrienne M. Bruger
                      Jr. Clerk
John Bosi
                      Sr. Guard (Mechanic) "
Ireson B. Warner
                     'Sr. Stationary Boiler
                                                                11
                               Fireman
                                                          . 11
Stephen E. Rutter
                          do
                                          **
Joseph M. Brown
                          do
David M. Hilburn
                          do
John M. Yeutter
                      Senior Guard (Mechanic)" "
Samuel L. Crawford, Jr. Princ. Guard " " "
Leo Charles Dillon
                                                        North. "
                      Asst. Messenger (Peoria, Ill.)
Alan Rhodes
                      Jr. Chem. Engr.
Lynford J. Wickerham
                      Asst. Bacteriologist "
                      Jr. Chem. Engr. (New Orleans, La.) South. "
Henri J. Molaison
                      Sr. Clerk (Purch. & Property)
William B. Thomson
Henrietta Ashbaugh
                      Asst. Clerk-Stenc. (Albany, Calif.) West. "
Ordean L. Brekke
                      Jr. Chem. Engr. (Urbana, Ill.)
                                                         Reg. Soybean Lab.
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Recent Appointments - Temporary

James N. Jefcoat Edith M. Harrison Jr. Clerk-Steno. Rolland C. Johnson Asst. Storekeeper (Wyndmoor.Pa.)

Under Scien. Helper (Laurel, Miss. Agr. Chem. Res. Div. Business Admin. East . Reg. Res. Lab.

Separations

Herbert C. Henry Mrs. Bessie C. Hurtig Walter Merle Brown Albert H. Korsin Marmion L. Weiss Henry Thos. Lisante James V. Guarino John O. Westergren W. Berkeley Grizzard Myra Kathlyn Jahnke

Jr. Sugar Technol. (Meridian, Miss.) Agr. Chen. Res. Div. Jr. Clerk-Steno. (Stoneville, Miss.) Cotton Ginning Inv. Asst. Architect (to War Dept.) Plans and Service Asst. Engr. Aide (Wydmoor, Pa.) Assoc. Mech. Engr. ". . " Engr. Inspector (Auburn, Ala.) Sr. Engr. Draftsman(to War Dept.) Sr. Arch. Draftsman Agent (CC) (Lafayette, Ind.) Rural Elec. Sr. Typist (Fargo, N. Dak.) West. Reg. Res. Lab.

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